

IN THE CLAIMS:

Claims 5-7, 11-26, and 31-45 were previously cancelled. Claims 2 and 4 are herein canceled. Claims 1, 27, and 46-49 have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Currently amended) A method for producing mRNA encoding a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain or a fragment thereof in a yeast cell, said method comprising:
providing said yeast cell with a nucleic acid encoding said ectodomain or said fragment thereof,
wherein said ectodomain comprises amino acid sequence 25-545 of SEQ ID NO:7, and
wherein the fragment thereof comprises an amino acid sequence selected from the group
consisting of 25-442, 97-442, and 97-545 of SEQ ID NO:7, ~~and wherein at least one
glycosylation site has been removed from said ectodomain or said fragment thereof,~~ and
wherein said nucleic acid encoding said ectodomain or fragment thereof has been
modified to utilize said yeast cell's codon usage, and wherein mAb 4G2 exhibits
specificity for said ectodomain or said fragment thereof; [[and]]
expressing said nucleic acid in said yeast cell, thus producing the mRNA encoding the
ectodomain or the fragment thereof, and
wherein the nucleic acid encoding said fragment encodes a peptide consisting of an amino acid
sequence selected from the group of amino acid sequences consisting of amino acids 25-
442, 97-442, and 97-545 of SEQ ID NO: 7.
2. (Canceled).

3. (Currently amended) The method according to ~~claim 2~~ claim 1, further comprising translating the thus produced mRNA encoding the ectodomain or fragment thereof into a *P. falciparum* AMA-1 ectodomain peptide or a fragment peptide thereof in said yeast cell; and purifying said peptide or said fragment peptide thereof.

4. through 7. (Canceled).

8. (Previously presented) The method according to claim 1, wherein the mRNA encoding *Plasmodium falciparum* AMA-1 ectodomain, or fragment thereof, comprises mRNA encoding *Plasmodium falciparum* Vietnam-Oak Knoll strain ectodomain.

9. (Previously Presented) The method according to claim 1, wherein said yeast cell is *Pichia*.

10. (Previously Presented) The method according to claim 9, wherein said yeast cell is *Pichia pastoris*.

11. through 26. (Canceled).

27. (Currently amended) A process for producing a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain or a fragment thereof, said method comprising: providing a yeast cell with an isolated or recombinant nucleic acid encoding said ectodomain or said fragment thereof, wherein said ectodomain comprises amino acid sequence 25-545 of SEQ ID NO:7, and wherein the fragment thereof comprises an amino acid sequence selected from the group consisting of 25-442, 97-442, and 97-545 of SEQ ID NO:7, ~~and wherein at least one glycosylation site has been removed from said ectodomain or said fragment thereof~~, and wherein said nucleic acid has been modified to utilize a yeast cell's codon usage, and wherein mAb 4G2 exhibits specificity for said ectodomain or said fragment thereof;

expressing said nucleic acid, thus producing the mRNA encoding ~~into~~ said ectodomain or said fragment thereof; and
translating the thus produced mRNA encoding the ectodomain or fragment thereof into a *P. falciparum* AMA-1 ectodomain peptide or a fragment peptide thereof in said yeast cell,
wherein the fragment peptide thereof consists of an amino acid sequence selected from the group of amino acid sequences consisting of amino acids 25-442, 97-442, and 97-545 of SEQ ID NO: 7, and
collecting said ectodomain or said fragment peptide thereof.

28. (Previously presented) The process of claim 27, further comprising purifying said ectodomain or said fragment thereof.

29. (Previously Presented) The process of claim 27, wherein said yeast cell is *Pichia*.

30. (Previously Presented) The process of claim 29, wherein said yeast cell is *Pichia pastoris*.

31. through 45. (Canceled).

46. (Currently Amended) A method for producing mRNA encoding a fragment of a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain in a yeast cell, said method comprising:

providing said yeast cell with a nucleic acid encoding said fragment, wherein the fragment thereof comprises an amino acid sequence selected from the group consisting of 25-442, 97-442, and 97-545 of SEQ ID NO:7, ~~and wherein at least one glycosylation site has been removed from said fragment,~~ and wherein said nucleic acid has been modified to utilize said yeast cell's codon usage, and wherein mAb 4G2 exhibits specificity for said fragment; [[and]]

expressing the nucleic acid in the yeast cell, thus producing the mRNA encoding the fragment,
and

wherein the nucleic acid encoding said fragment encodes a peptide comprising an amino acid sequence selected from the group of amino acid sequences consisting of amino acids 25-442, 97-442, and 97-545 of SEQ ID NO: 7.

47. (Currently amended) A method for producing a fragment of a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain, said method comprising:

providing a yeast cell with an isolated or recombinant nucleic acid encoding the fragment, wherein the fragment comprises an amino acid sequence selected from the group consisting of 25-442, 97-442, and 97-545 of SEQ ID NO: 7, ~~and wherein at least one glycosylation site has been removed from said fragment~~, and wherein said nucleic acid has been modified to utilize said yeast cell's codon usage, and wherein mAb 4G2 exhibits specificity for said fragment;

expressing the nucleic acid, thus producing the mRNA encoding said ~~into the~~ fragment translating said mRNA encoding said fragment into a fragment peptide; and collecting the fragment peptide,

wherein the fragment peptide consists of an amino acid sequence selected from the group of amino acid sequences consisting of amino acids 25-442, 97-442, and 96-545 of SEQ ID NO: 7.

48. (Currently amended) A method for producing mRNA encoding a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain or a fragment thereof in a yeast cell, the method comprising:

providing the yeast cell with a nucleic acid encoding the ectodomain or the fragment thereof, wherein the ectodomain ~~comprises~~ consists of amino acid sequence 25-545 of SEQ ID NO:7, and wherein the fragment thereof ~~comprises~~ consists of an amino acid sequence selected from the group consisting of 25-442, 97-442, and 97-545 of SEQ ID NO:7, ~~and wherein at least one eukaryotic glycosylation site has been removed relative to a wild-type Plasmodium falciparum AMA-1 ectodomain or a fragment thereof~~, and wherein the nucleic acid has been modified to utilize said yeast cell's codon usage, and wherein mAb 4G2 exhibits specificity for the ectodomain or the fragment thereof; [[and]]

expressing the nucleic acid, thus producing the mRNA encoding a *Plasmodium falciparum* AMA-1 ectodomain or the fragment thereof; and
wherein the nucleic acid encoding said fragment encodes a peptide consisting of an amino acid
sequence selected from the group of amino acid sequences consisting of amino acids 25-
442, 97-442, and 97-545 of SEQ ID NO: 7.

49. (Currently amended) A method for producing mRNA encoding a *Plasmodium falciparum* apical membrane antigen-1 (AMA-1) ectodomain ~~or a fragment thereof~~ in a yeast cell, said method comprising:

providing the yeast cell with a nucleic acid encoding the ectodomain ~~or the fragment thereof~~,
~~wherein the ectodomain or the fragment thereof comprises~~ comprising the amino acid
sequence 97-442 of SEQ ID NO:7, ~~and wherein at least one glycosylation site has been~~
~~removed from the ectodomain or the fragment thereof~~, and wherein the nucleic acid
encoding the ectodomain ~~or the fragment thereof~~ has been modified to utilize the yeast
cell's codon usage, and wherein mAb 4G2 exhibits specificity for the ectodomain ~~or the~~
fragment thereof; [[and]]

expressing the nucleic acid in the yeast cell, thus producing the mRNA encoding the ectodomain
~~or the fragment thereof~~ , and
wherein the nucleic acid encoding said fragment encodes a peptide consisting of an amino acid
sequence selected from the group of amino acid sequences consisting of amino acids 97-442, of
SEQ ID NO: 7.